Appendix E: Matching rate of URLs of Decahose and Twitter panel

In this analysis, we match URLs from the Decahose and Twitter panel datasets to domain quality ratings provided by NewsGuard. A URL is considered "matched" if its domain appears on these quality lists. This process is essential for identifying the proportion of URLs in each dataset associated with credible sources, which helps calculate an information quality score. To provide a comprehensive view of the data, Table E1 displays the total number of monthly tweets and the number of tweets containing URLs for both the Decahose and Twitter panel datasets. Table E2 shows the average matching rate of URLs to NewsGuard over time, which remains stable, thereby supporting the reliability of the operationalization. By examining these tables, we can assess the consistency and reliability of the matching process in both datasets and track how content quality evolves over time.

Table E1. *Number of monthly tweets in panel and Decahose.*

Rating	Date	Panel Tweets	Panel Tweets with URL	Decahose Tweets	Decahose Tweets with URL
0	2022–01	38,106,998	644,542	1,201,387,678	32,373,303
1	2022–02	33,600,826	599,137	1,014,578,411	31,787,823
2	2022–03	32,669,443	665,383	1,232,923,496	35,596,005
3	2022–04	33,412,928	597,091	1,208,931,029	29,511,838
4	2022–05	35,226,527	635,331	1,213,651,294	30,733,960
5	2022–06	31,606,286	588,197	1,135,417,853	28,604,502
6	2022–07	24,921,208	543,789	998,126,320	28,259,643
7	2022–08	27,663,916	544,347	1,172,958,749	29,162,490
8	2022–09	18,427,104	376,399	1,234,488,882	30,294,317
9	2022–10	18,548,562	397,879	1,309,564,229	31,699,404
10	2022–11	19,330,821	404,386	1,235,269,931	34,697,429
11	2022–12	17,921,053	427,573	1,175,893,788	29,051,029
12	2023–01	18,904,560	489,688	1,082,840,889	29,701,054
13	2023–02	16,990,544	456,955	1,012,437,280	23,728,139
14	2023–03	15,759,987	458,567	1,185,931,200	28,431,740
15	2023–04	10,854,955	367,398	1,106,387,861	27,942,486
Total		393,945,718	8,196,662	18,520,788,890	481,575,162

Table E2. The matching rate of URLs ranges from 0 to 1, where 1 indicates a complete match and 0 indicates no match at all.

Rating	Date	Panel Matching Rate	Decahose Matching Rate
0	2022–01	0.446	0.21
1	2022–02	0.438	0.199
2	2022–03	0.434	0.194
3	2022–04	0.422	0.203
4	2022–05	0.441	0.207
5	2022–06	0.446	0.21
6	2022–07	0.446	0.205
7	2022–08	0.439	0.199
8	2022–09	0.43	0.181
9	2022–10	0.419	0.179
10	2022–11	0.411	0.152
11	2022–12	0.399	0.168
12	2023–01	0.398	0.172
13	2023–02	0.407	0.184
14	2023–03	0.425	0.196
15	2023–04	0.454	0.201
Average		0.431	0.191